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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/581,103	08/29/2000	Markus Kietzmann	203 VON BEZO	2345

7590 04/23/2004

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EXAMINER

HUFFMAN, JULIAN D

ART UNIT	PAPER NUMBER
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2853

DATE MAILED: 04/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No. 09/581,103	Applicant(s) KIETZMANN, MARKUS	
	Examiner Julian D. Huffman	Art Unit 2853	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 June 2000.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 12,13,17,18 and 20-23 is/are rejected.
- 7) ☒ Claim(s) 14-16 and 19 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 August 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities:

In the specification it is respectfully suggested that applicant provide headings such as "Field of the Invention and Related Art" (page 1), "Summary of the invention" (page 3), "Brief Description of the Drawings" (page 5) and "Detailed Description of the Preferred Embodiments" (Page 5).

On page 3, third paragraph, references are made to the claim numbers. It is respectfully suggested that the references to the claim numbers be omitted since the claims will be renumbered prior to allowance.

On page 6, last paragraph, third line from the bottom, it is respectfully suggested that the word "form" be changed to "from".

Appropriate correction is required.

Drawings

2. Figure 4 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Additionally, it is suggested that figs. 1 and 2 be provided on a first drawing sheet and figs. 3 and 4 be provided on a second drawing sheet as the drawings tend to run together on one sheet.

Claim Objections

3. Claim 20 is objected to because of the following informalities:

In claim 20, the last line, it is respectfully suggested that the word "into" be changed to "towards" since if the dispensing head projected into the measuring light segment, it would interrupt the passage of light to the camera.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 20-23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 20-23 recite a procedure for recording images of drops, but cite no steps in performing the procedure. It is not clear if claims 20-23 are method claims or apparatus claims.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 12, 13, 17 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Mitani et al. (U.S. 5,621,524).

Mitani et al. disclose an image-recording system for a dispensing head with numerous dispensers (fig. 19, element 21), in which a predetermined light path (53) from a lighting device (23) to an image-recording device (51) intersects a drop release area of a drop-releasing dispenser (21) to be detected (fig. 7);

characterized in that a deviating device (28) is provided with which a measuring light segment is formed along a predetermined reference line through said drop release area, and that said lighting and image-recording devices are spaced apart from said reference line relative to said drop releasing dispenser (fig. 19);

wherein said deviating device consists of at least one mirror (28) that is inclined by a first deviating angle relative to said reference line and deflects light from said measuring light segment;

wherein said lighting device consists of a pulsed light emitted (laser), and said image-recording device has a camera (51) with a lens (30); and

wherein said dispensing head is positioned relative to said image-recording system in such a way that said dispenser projects toward said measuring light segment (fig. 19).

8. Claims 12, 17, 18 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Kadowaki et al. (JP 404027552A).

Kadowaki et al. disclose an image-recording system for a dispensing head with numerous dispensers (fig. 7, element 2), in which a predetermined light path (I1-I4) from a lighting device (31) to an image-recording device (38) intersects a drop release area (q) of a drop-releasing dispenser (2) to be detected;

characterized in that a deviating device (33') is provided with which a measuring light segment is formed along a predetermined reference line through said drop release area, and that said lighting and image-recording devices are spaced apart from said reference line relative to said drop releasing dispenser (fig. 7);

in which said lighting device consists of a pulsed light emitted, and said image-recording device has a camera (38) with a lens (36);

wherein said lighting and image-recording devices are arranged in a carrier plane over which said dispensing head can traverse (fig. 1), so that the tips of said dispensers move in a reference plane parallel to said carrier plane, wherein said deviating device forms said measuring segment at a perpendicular distance from said carrier plane and directly adjacent to said reference plane (fig. 7); and

wherein said dispensing head is positioned relative to said image-recording system in such a way that said dispenser projects towards said measuring light segment (fig. 7).

Allowable Subject Matter

9. Claims 14, 15, 16 and 19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

With regards to claims 14-16, the prior art of record does not disclose the second mirror in the combination.

With regards to claim 19, the prior art of record does not disclose the measuring light segment essentially identical to the distance of adjacent dispensers of the dispensing head.

10. Claims 21-23 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

With regards to claim 21, the prior art of record does not disclose varying delay times between a trigger signal of the dispenser and a trigger signal of the lighting device operated as a stroboscope.

With regards to claim 22 and 23, the prior art of record does not disclose a drop-free measuring segment and generating differential images from recorded drop images and reference images for image processing.

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julian D. Huffman whose telephone number is (571)272-2147. The examiner can generally be reached Monday through Friday from 9:00 a.m. to 5:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Meier, can be reached at (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



JH

April 14, 2004



**Thinh Nguyen
Primary Examiner
Technology Center 2800**